

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GERARDUS G.P. VAN GORKOM

Appeal 2007-1351
Application 10/628,942
Technology Center 2600

Decided: July 27, 2007

Before JOSEPH L. DIXON, HOWARD B. BLANKENSHIP, and MAHSHID D. SAADAT, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-5 and 8-22, the only claims pending in this application. We have jurisdiction under 35 U.S.C. §§ 6(b), 134(a).

INTRODUCTION

The claims are directed to a display device that comprises a light guide and a movable element. A force is exerted for optical contact between the movable element and the light guide, with light emanating from the display at the locations where optical contact takes place. Appellant's invention relates to different measures that may be taken to reduce the force necessary for moving the movable element. (*See Abstract.*) Claims 1 and 19 are illustrative:

1. A display device comprising:
 - a light guide;
 - a movable element; and
 - selection means to locally bring the movable element into contact with the light guide;
 - wherein the movable element is situated in an evacuated space below 0.1 atmosphere.

19. A display device comprising:
 - a light guide;
 - a movable element; and
 - selection means to locally bring the movable element into contact with the light guide,
 - wherein at least one of the movable element and the light guide is provided with an anti-adhesion layer on the side at which the contact is made between the movable element and the light guide.

The Examiner relies on the following prior art references to show unpatentability:

Adachi	US 5,631,664	May 20, 1997
Stern	US 5,771,321	Jun. 23, 1998

The rejections as presented by the Examiner are as follows:

1. Claims 19 and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Stern.¹
2. Claims 1, 3, 5, 10, 11, 13-15, and 22 are rejected under 35 U.S.C. § 103(a) as unpatentable over Stern.
3. Claims 2, 4, 8, 9, 12, 16-18, and 20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Stern and Adachi.

OPINION

In response to the § 102 rejection of claim 19, Appellant contests the Examiner's finding that Stern discloses an "anti-adhesion layer" within the meaning of the claim. First, the Examiner finds that Stern describes an anti-adhesion layer as claimed at column 13, lines 32 through 52 of the reference. Stern describes a layer of excess charge 66 (Fig. 5) embedded in the upper surface of the light storage plate. The charge layer can be produced by, *inter alia*, ion-implantation of a light storage plate material such as a transparent form of "Teflon." Second, the Examiner finds that, in the alternative, stand-off elements 46, 54 (col. 10, ll. 46-60; Fig. 4B) meet the requirements of the claimed anti-adhesion layer. (Answer 3.)

¹ The instant application was filed in the USPTO on July 29, 2003. According to Appellant, this application is a divisional of application 09/355,592, filed November 15, 1999, now U.S. Patent 6,628,246. Appellant also claims priority (under 35 U.S.C. § 119) to European Patent Office (EPO) application 97203741.0, filed November 29, 1997, and to EPO application 98202065.3, filed June 22, 1998. The Stern patent issued from an application filed in the USPTO on January 4, 1996. Appellant does not contest the Examiner's applying Stern as a reference under 35 U.S.C. § 102(b).

Appellant submits in response that Stern teaches that the purpose of the layer of excess charge 66 is to produce a constant electrostatic downward force on tap beam 28, via tap beam electrode 47. In Appellant's view, a layer designed to hold the flexible member (tap beam 28) in contact with the light guide (12) cannot be said to correspond to an "anti-adhesion layer" as claimed. (Reply Br. 4.)

We observe that Appellant's anti-adhesion layer may be embodied as a "Teflon layer . . ." (Specification 3: 11-12.)² We find, consistent with the Examiner's position, that the plate material described by Stern may be considered an "anti-adhesion" layer, notwithstanding the fact that the layer contains charges tending to hold down tap beam 28 in a "normally on" geometry (*see* Stern Fig. 5, depicting the "off" state). The simplest, thus best, explanation for Stern's teaching of a material for the layer is for avoiding physical adhesion between any contacting surfaces when the tap beam is flexed upward to the "off" state, such that in essence only the constant static force determined by the implanted charges need be overcome. Moreover, even if there were no physical contact between surfaces, we do not see how a material formed from the same material as that taught by Appellant cannot be considered an "anti-adhesion" layer, in view of the breadth of claim 19. The claim does not require any more of the layer than that it be provided on at least one of the movable element and the light

² Both Stern and the instant application reflect improper use of a trademarked term. "Teflon" is a word mark owned by E.I. du Pont de Nemours and Company, used in commerce with a number of different goods. The term when used in a generic sense most often refers to a fluoropolymer having non-stick properties (e.g., polytetrafluoroethylene).

guide, and on the side at which the contact is made between the movable element and the light guide.

Appellant suggests (Reply Br. 5) that the term must be interpreted in view of the Specification, which we infer to mean that the Specification sets forth a definition for “anti-adhesion” that distinguishes over the reference. Appellant does not, however, point out where the definition may lie. Appellant also suggests (*id.*) that one skilled in the art would not consider the structure described by Stern as an anti-adhesion layer, but does not provide or refer to any evidence in support of the allegation.

With respect to the Examiner’s alternative finding that stand-off elements 46 or 54 meet the requirements of the claimed anti-adhesion layer, Appellant in the Reply Brief does not explain, or even allege, that stand-off elements 46 cannot be considered an anti-adhesion layer. The rejection could be sustained on that basis alone. With respect to stand-off elements 54, Appellant submits that “discrete” elements 54 do not constitute a “layer” as conventionally interpreted, and as the term is used in the Specification. (Br. 5.) Appellant does not, however, submit what the “conventional” meaning of layer may be, nor point to any support in the Specification for the position. Stern does not refer to stand-off elements 54 as a “layer,” while describing other structures as “layers,” consistent with Appellant’s position. The Examiner notes, however, that Stern discloses (col. 10, ll. 46-53) that stand-offs may be formed from a substrate, the stand-offs thus being consistent with a “layer” of substrate as conventionally interpreted. (Answer 8.)

We find that the evidence provides ample support for the Examiner’s findings, and are not persuaded of error in the rejection of independent claim

19. We sustain the rejection of claim 19. We do not sustain the rejection of claim 21 because, as Appellant notes (Br. 6), claim 21 depends from claim 20, which is rejected under 35 U.S.C. § 103(a) over Stern and Adachi.

We turn next to the rejection of claims 1, 3, 5, 10, 11, 13-15, and 22 under 35 U.S.C. § 103(a) as unpatentable over Stern. With regard to claim 1, Appellant argues that Stern fails to teach or suggest a movable element that is situated in an evacuated space below 0.1 atmosphere.

The Examiner notes, however, that Stern teaches that the movable member is in an evacuated space. In particular, Stern describes a manufacture in which the ambient gas in the space between the light storage plate and the viewing substrate is partially evacuated and a selected gas is “optionally” introduced. The substrate and plate may be held together by an O-ring sealed with caulk, and by the differential air pressure with respect to the partially evacuated chamber. (Stern col. 43, ll. 17-39).

Stern thus teaches that the movable element (28) may be situated in an evacuated space. The reference does not express a lower bound with respect to the degree of evacuation. We consider Stern’s teaching sufficient to shift the burden to Appellant to provide evidence of nonobviousness of the claimed range of “below 0.1 atmosphere.” That Stern might teach evacuation for a different purpose is not controlling. “In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741-42, 82 USPQ2d 1385, 1397 (2007).

Because Appellant has not shown that the evidence fails to establish a *prima facie* case of obviousness of the subject matter as a whole of claim 1, we sustain the rejection of claim 1. Claims 3, 5, 10, 11, and 13-15, which

are not separately argued, fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1) (vii). We do not sustain the rejection of claim 22 because, as Appellant notes, the claim depends from claim 20, rejected over the combination of Stern and Adachi.

In the rejection of claims 2, 4, 8, 9, 12, 16-18, and 20 under 35 U.S.C § 103(a) as unpatentable over Stern and Adachi, the Examiner finds that Stern does not disclose a transparent electrode or that light is transmitted through a transparent electrode. The rejection turns to Adachi, which discloses at column 3 a transparent electrode and guiding visible light to the outside of an image display apparatus through the transparent electrode. (Answer 5-6.)

We are in substantial agreement with Appellant's arguments in the briefs in response to the rejection over Stern and Adachi. The embodiments described by Stern appear limited to using electrodes that are laterally offset with respect to light transmitting from the display apparatus; e.g., Figure 4A, electrodes 44, 47. The Examiner has not identified any plausible reason from the prior art as to why the artisan would have used transparent electrodes in any of the structures described by Stern. We thus do not sustain the rejection of claims 2, 4, 8, 9, 12, 16-18, and 20.

CONCLUSION

In summary, the rejection of claims 19 and 21 under 35 U.S.C. § 102(b) as being anticipated by Stern is affirmed with respect to claim 19 but reversed with respect to claim 21. The rejection of claims 1, 3, 5, 10, 11, 13-15, and 22 under 35 U.S.C § 103(a) as unpatentable over Stern is affirmed with respect to claims 1, 3, 5, 10, 11, and 13-15 but reversed with

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respect to claim 22. The rejection of claims 2, 4, 8, 9, 12, 16-18, and 20 under 35 U.S.C § 103(a) as unpatentable over Stern and Adachi is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

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AFFIRMED-IN-PART

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